CARE Solution (ABI 3730XL)
User Manual

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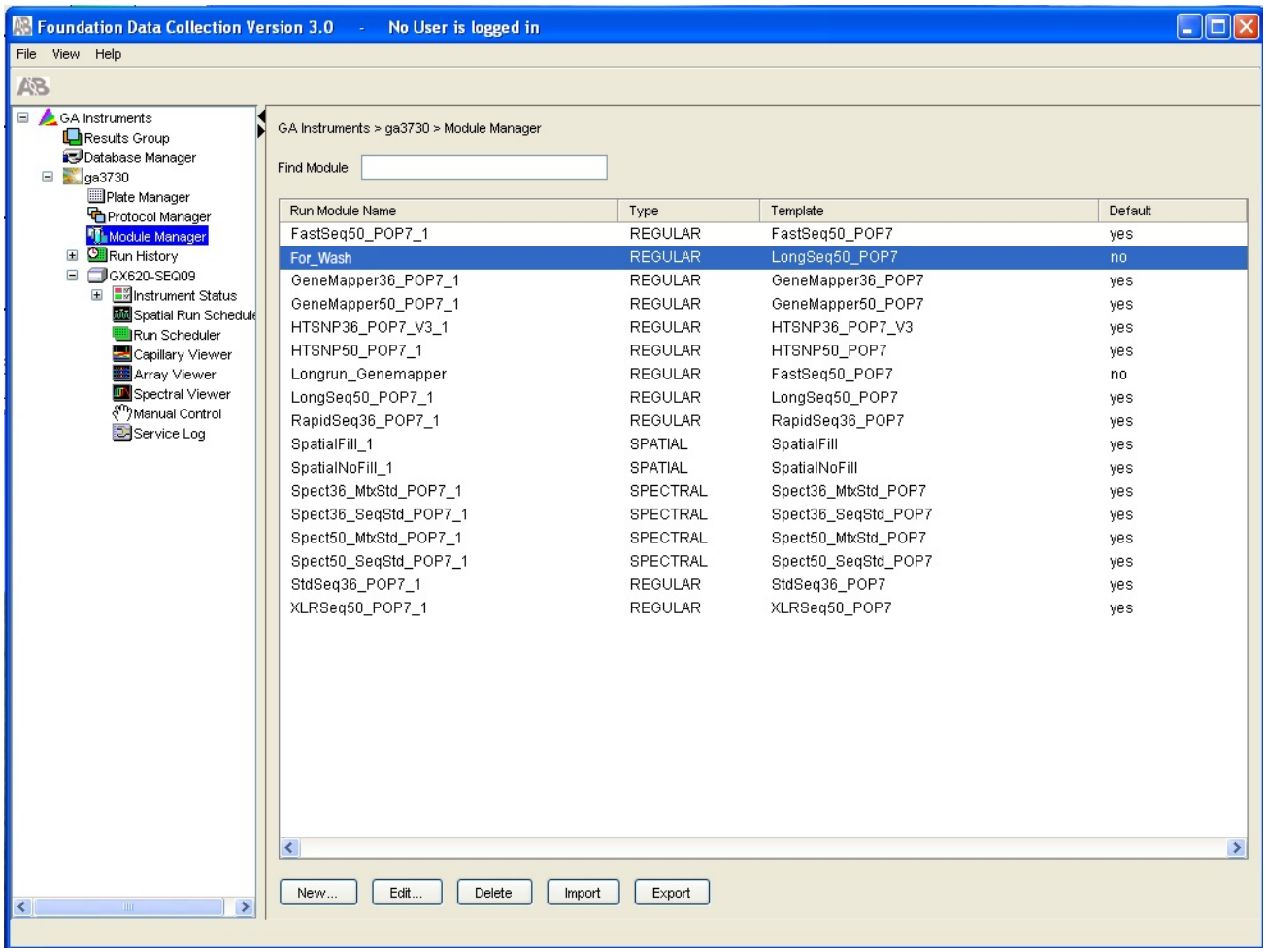
Care Solution Protocol:

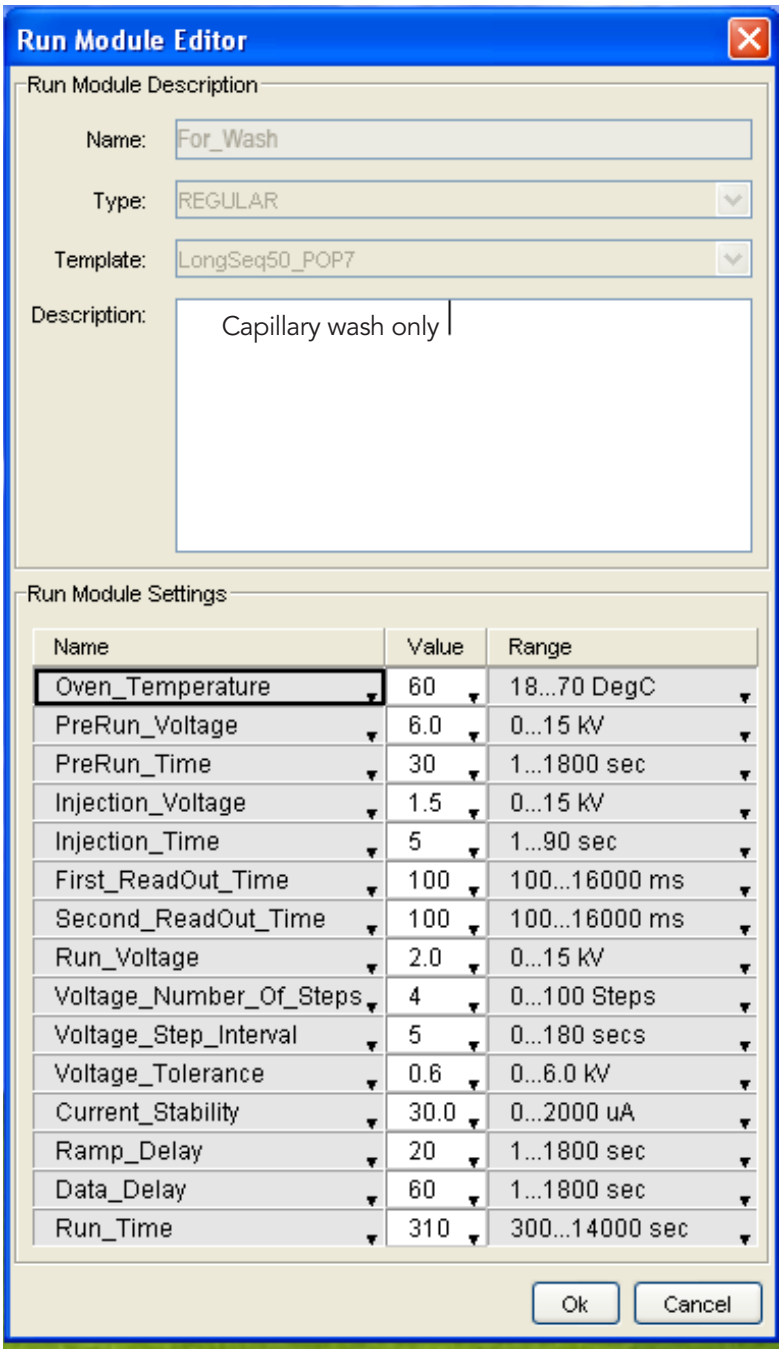
1. Create a new module.

(a) Open Foundation Data Collection Version 3.0.

(b) Under "GA Instruments>ga3730," click on "Module Manager" in the left-hand column.

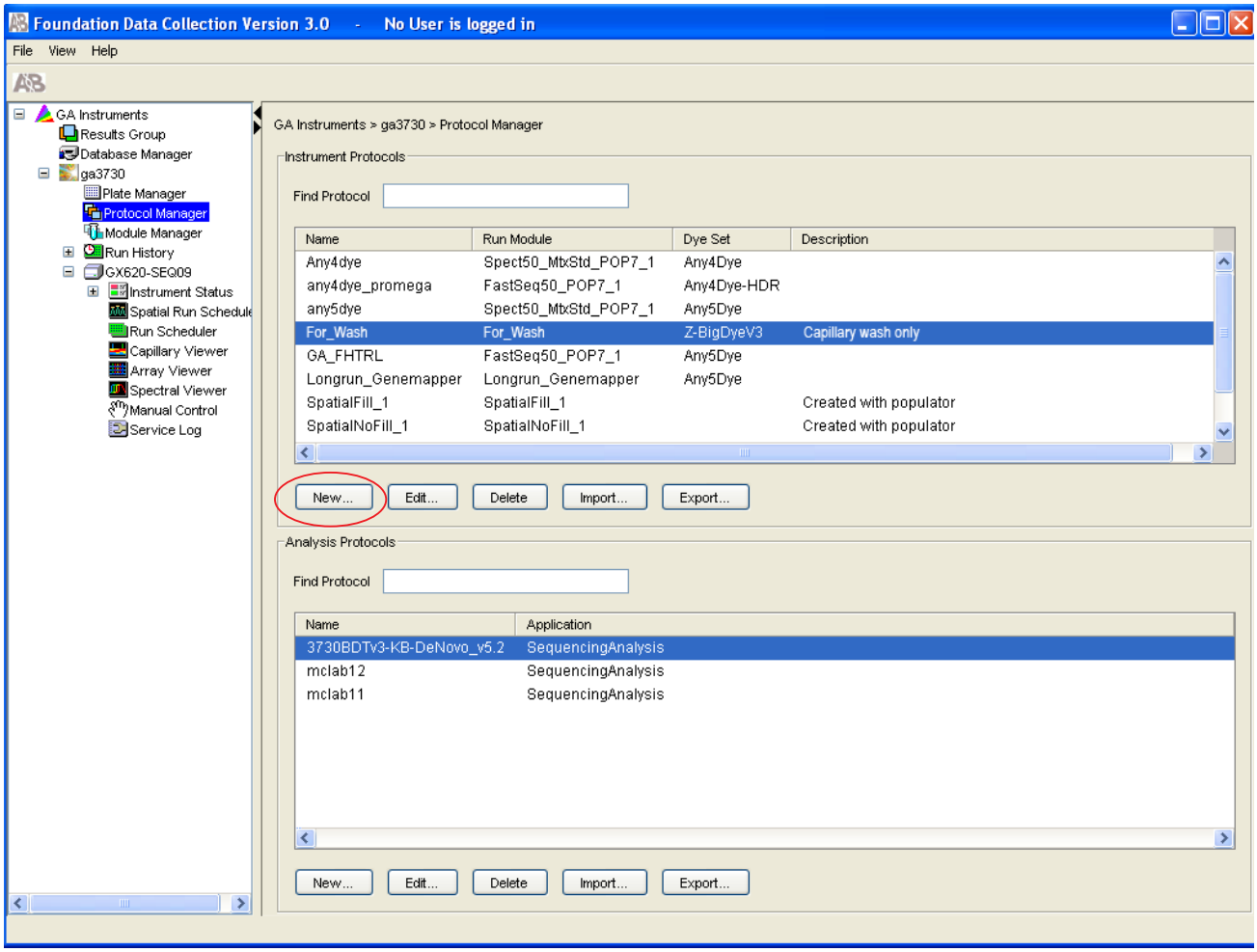
(c) On the bottom of the window, click "New" to set up a new module.

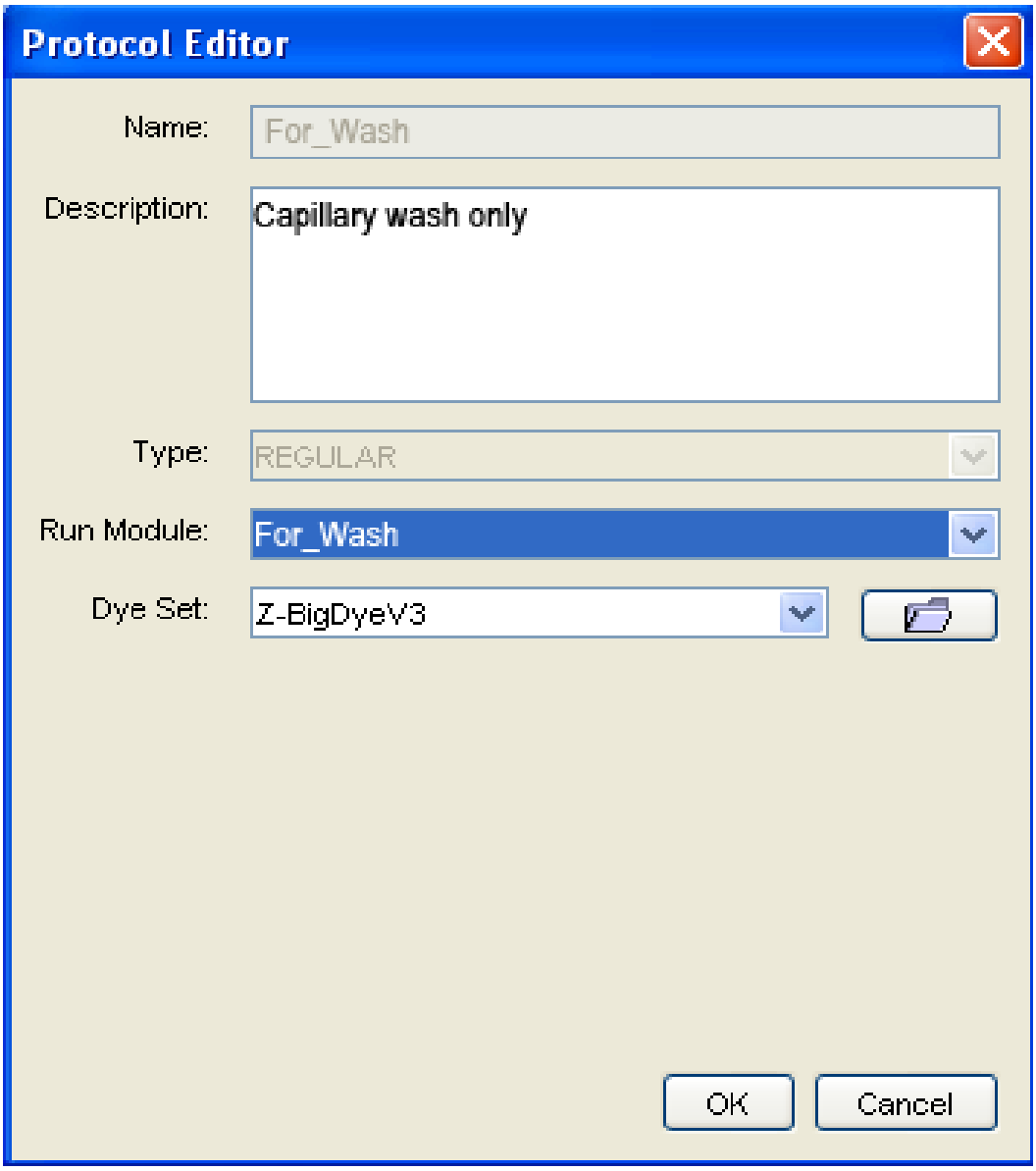

Foundation Data Collection Version 3.0 - No User is logged in
File View Help
GA Instruments
Results Group
Database Manager
ga3730
Plate Manager
Protocol Manager
Module Manager
Run History
GX620-SEQ09
Instrument Status
Spatial Run Schedule
Run Scheduler
Capillary Viewer
Array Viewer
Spectral Viewer
Manual Control
Service Log
GA Instruments > ga3730 > Module Manager
Find Module
Run Module Name | Type | Template | Default
FastSeq50_POP7_1 | REGULAR | FastSeq50_POP7 | yes
For_Wash | REGULAR | LongSeq50_POP7 | no
GeneMapper36_POP7_1 | REGULAR | GeneMapper36_POP7 | yes
GeneMapper50_POP7_1 | REGULAR | GeneMapper50_POP7 | yes
HTSNP36_POP7_V3_1 | REGULAR | HTSNP36_POP7_V3 | yes
HTSNP50_POP7_1 | REGULAR | HTSNP50_POP7 | yes
Longrun_Genemapper | REGULAR | FastSeq50_POP7 | no
LongSeq50_POP7_1 | REGULAR | LongSeq50_POP7 | yes
RapidSeq36_POP7_1 | REGULAR | RapidSeq36_POP7 | yes
SpatialFill_1 | SPATIAL | SpatialFill | yes
SpatialNoFill_1 | SPATIAL | SpatialNoFill | yes
Spect36_MtxStd_POP7_1 | SPECTRAL | Spect36_MtxStd_POP7 | yes
Spect36_SeqStd_POP7_1 | SPECTRAL | Spect36_SeqStd_POP7 | yes
Spect50_MtxStd_POP7_1 | SPECTRAL | Spect50_MtxStd_POP7 | yes
Spect50_SeqStd_POP7_1 | SPECTRAL | Spect50_SeqStd_POP7 | yes
StdSeq36_POP7_1 | REGULAR | StdSeq36_POP7 | yes
XLRSeq50_POP7_1 | REGULAR | XLRSeq50_POP7 | yes
New... Edit... Delete Import Export


Run Module Editor
Run Module Description
Name: For_Wash
Type: REGULAR
Template: LongSeq50_POP7
Description: Capillary wash only
Run Module Settings
Name | Value | Range
Oven_Temperature | 60 | 18...70 DegC
PreRun_Voltage | 6.0 | 0...15 kV
PreRun_Time | 30 | 1...1800 sec
Injection_Voltage | 1.5 | 0...15 kV
Injection_Time | 5 | 1...90 sec
First_ReadOut_Time | 100 | 100...16000 ms
Second_ReadOut_Time | 100 | 100...16000 ms
Run_Voltage | 2.0 | 0...15 kV
Voltage_Number_Of_Steps | 4 | 0...100 Steps
Voltage_Step_Interval | 5 | 0...180 secs
Voltage_Tolerance | 0.6 | 0...6.0 kV
Current_Stability | 30.0 | 0...2000 uA
Ramp_Delay | 20 | 1...1800 sec
Data_Delay | 60 | 1...1800 sec
Run_Time | 310 | 300...14000 sec
Ok
Cancel

2. Setting Run Module Editor Values .
(a) Name the module "For_Wash."
(b) Under "Type," choose "REGULAR."
(c) Under "Template," choose "LongSeq50_POP7."
(d) Name Description "Capillary wash only."
(e) Adjust settings to match "Value" column listed above.
(f) Click "Ok."

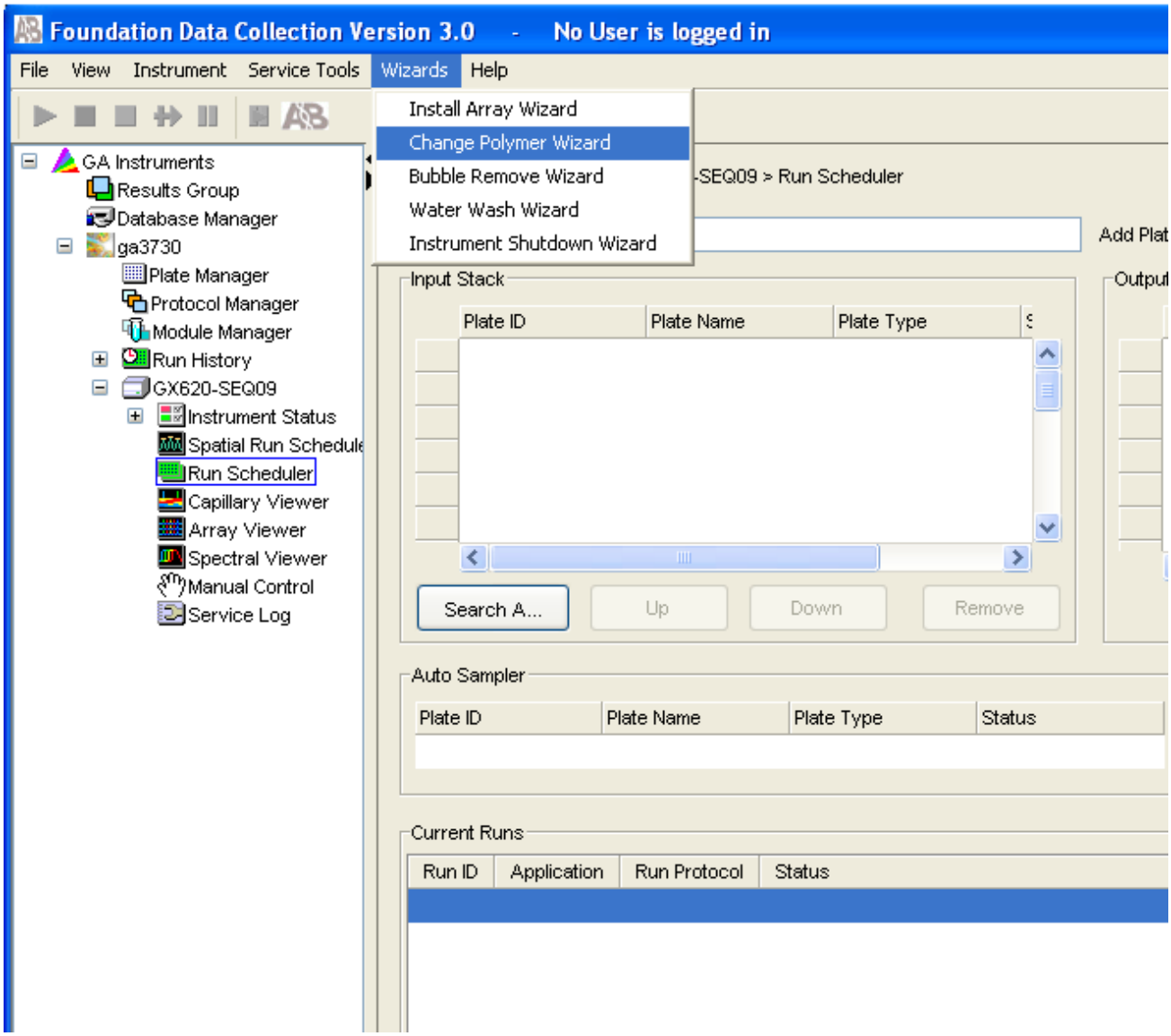
3. Creat a new run protocol.
(a) In the left hand column under "GA Instruments>ga3730," click on "Protocol Manager."
(b) Click "New."

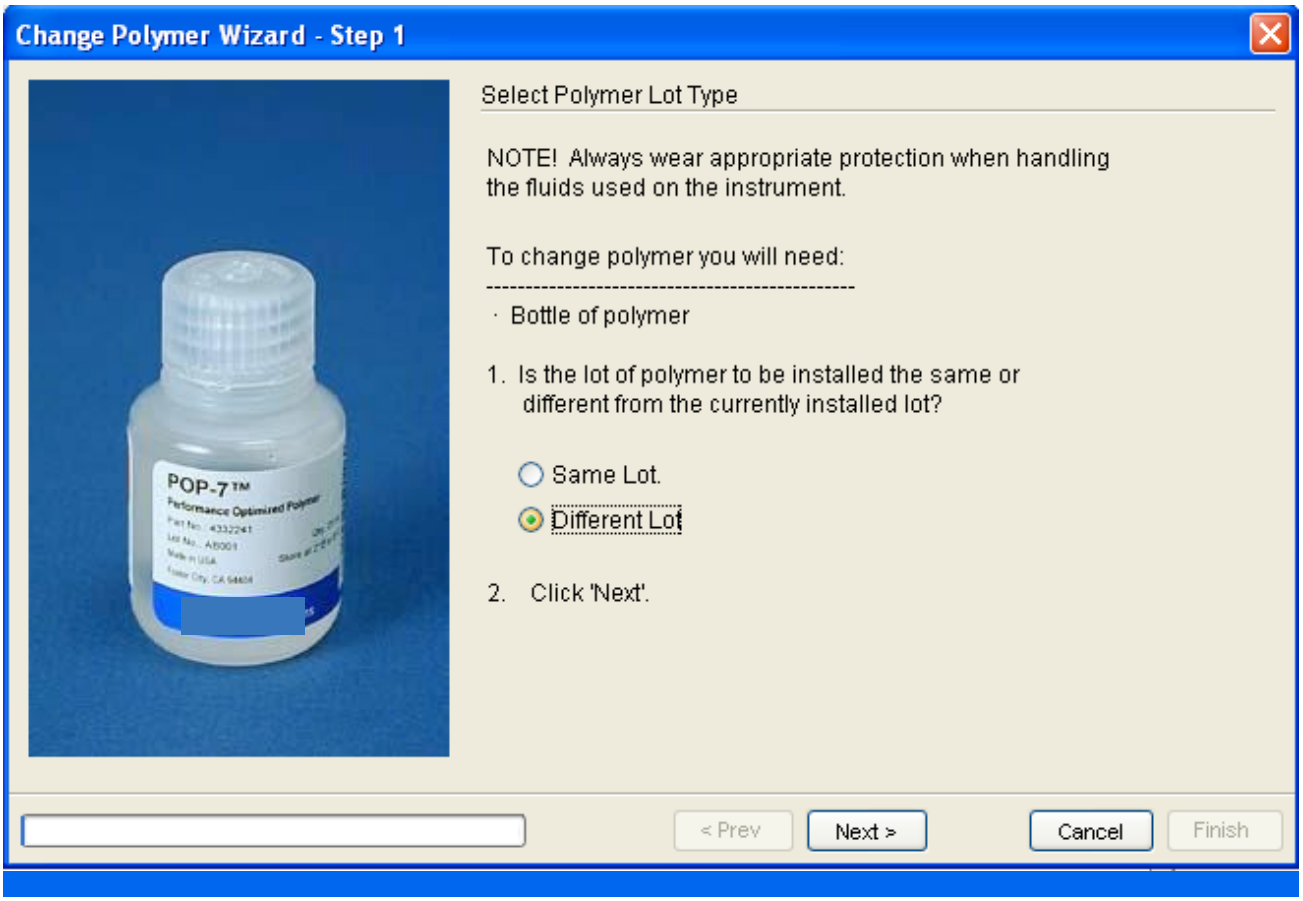




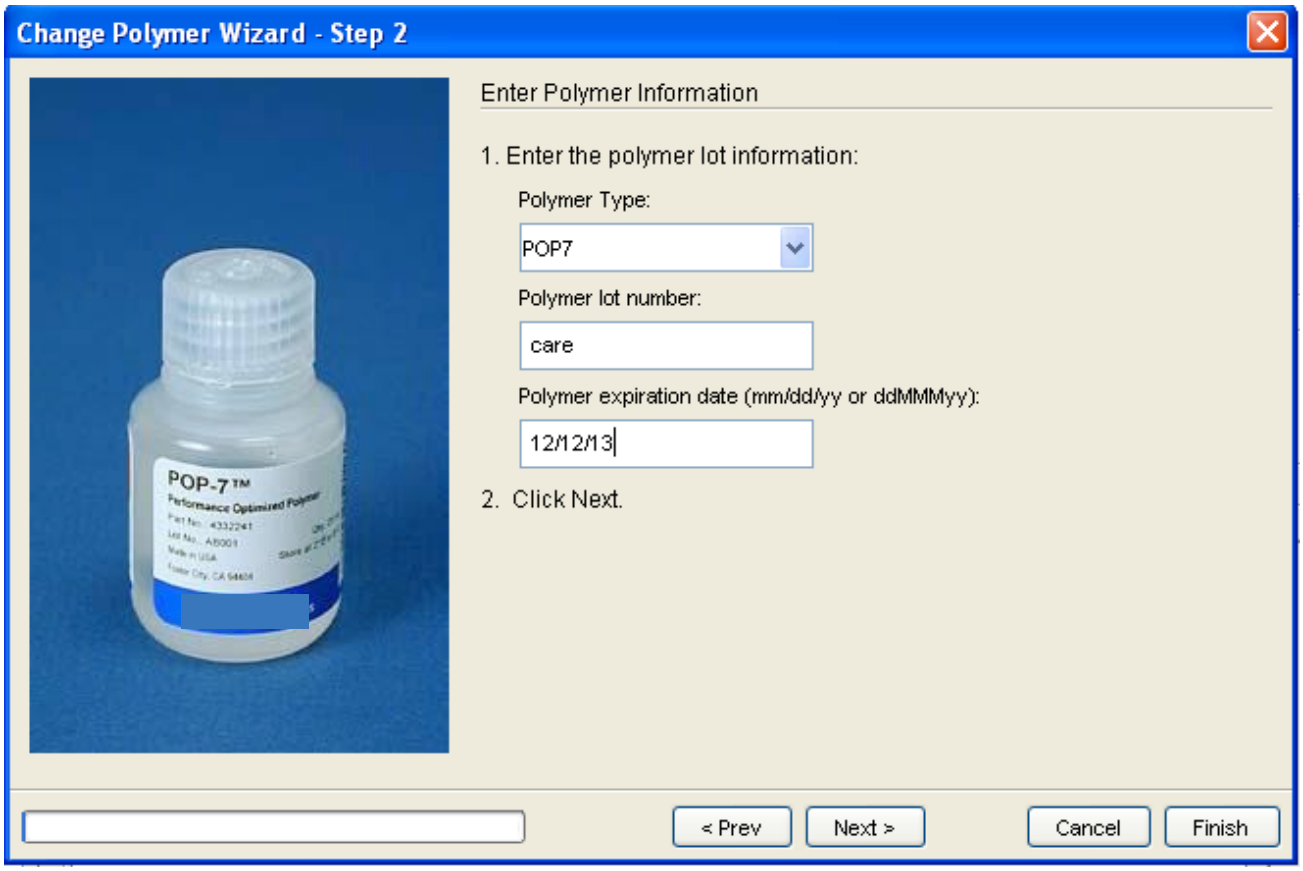
4. Setting "Protocol Editor" Values.
(a) Name the Protocol "For_Wash."
(b) Name Description "Capillary wash only."
(c) Under "Type," choose "REGULAR."
(d) Under "Run Module," choose "For_Wash."
(e) Under "Dye Set," choose "Z-BigDyeV3."
(f) Click "OK."

5. Perform "Change polymer Wizard", simply follow the normal protocol.
(a) From "Run Scheduler" screen, go "Change Polymer Wizard" and click it. Then we can go the procedure of "Change Polymer Wizard."
(b) Step 1, choose "Different Lot" then "Next."

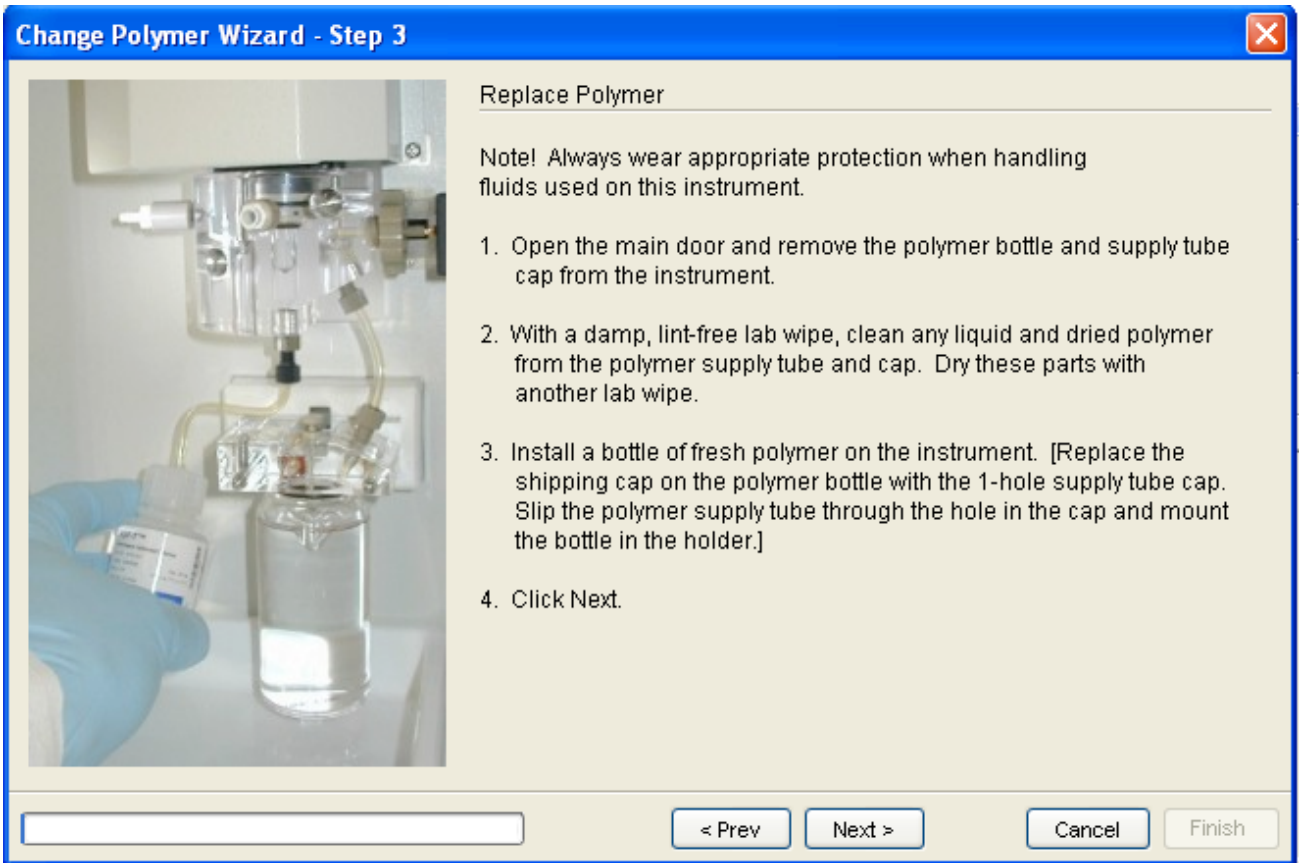



Change Polymer Wizard - Step 1
Select Polymer Lot Type
NOTE! Always wear appropriate protection when handling the fluids used on the instrument.
To change polymer you will need:
· Bottle of polymer
1. Is the lot of polymer to be installed the same or different from the currently installed lot?
Same Lot.
Different Lot
2. Click 'Next'.
POP-7™
< Prev
Next >
Cancel
Finish

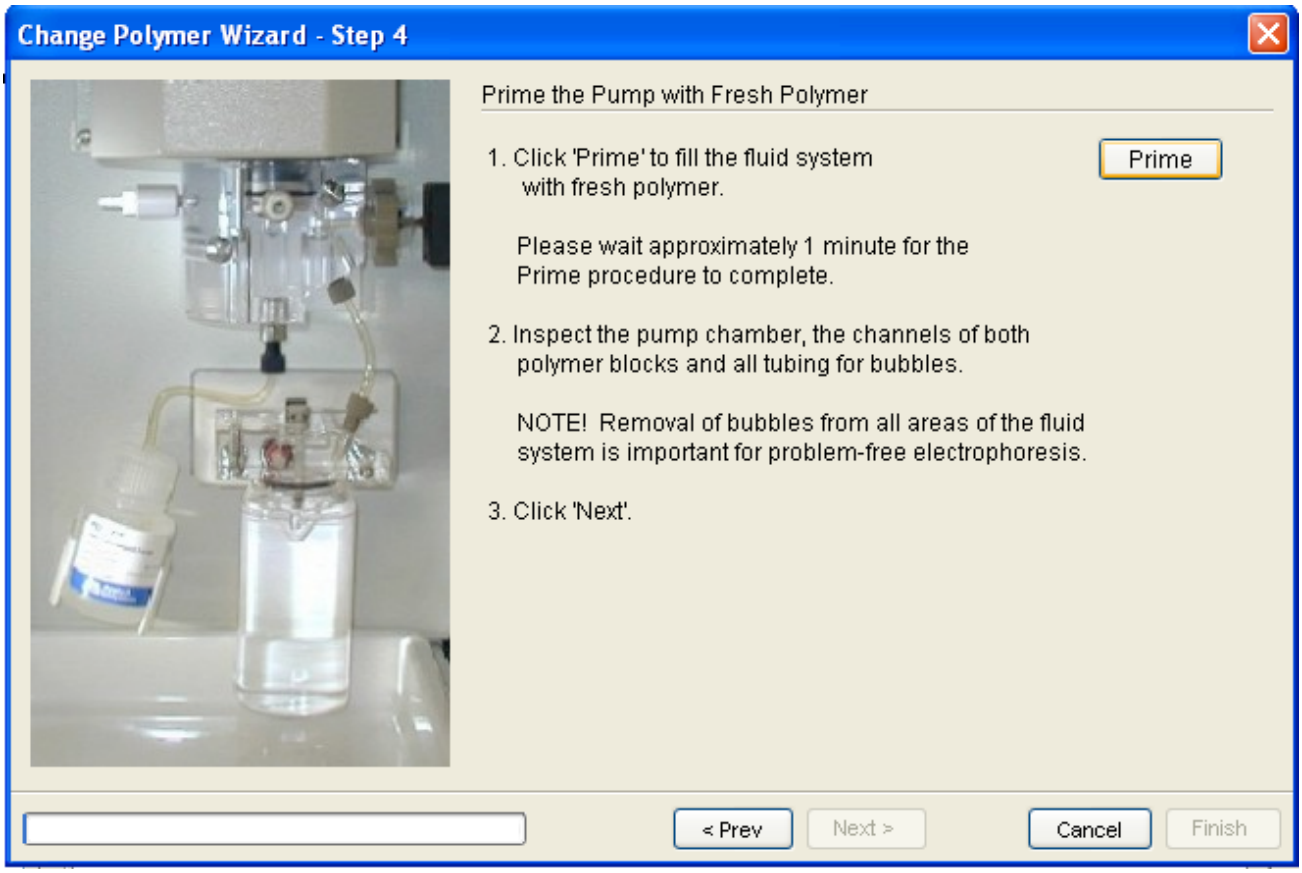
(c) Step 2, enter Lot#"care" and the expiration date.



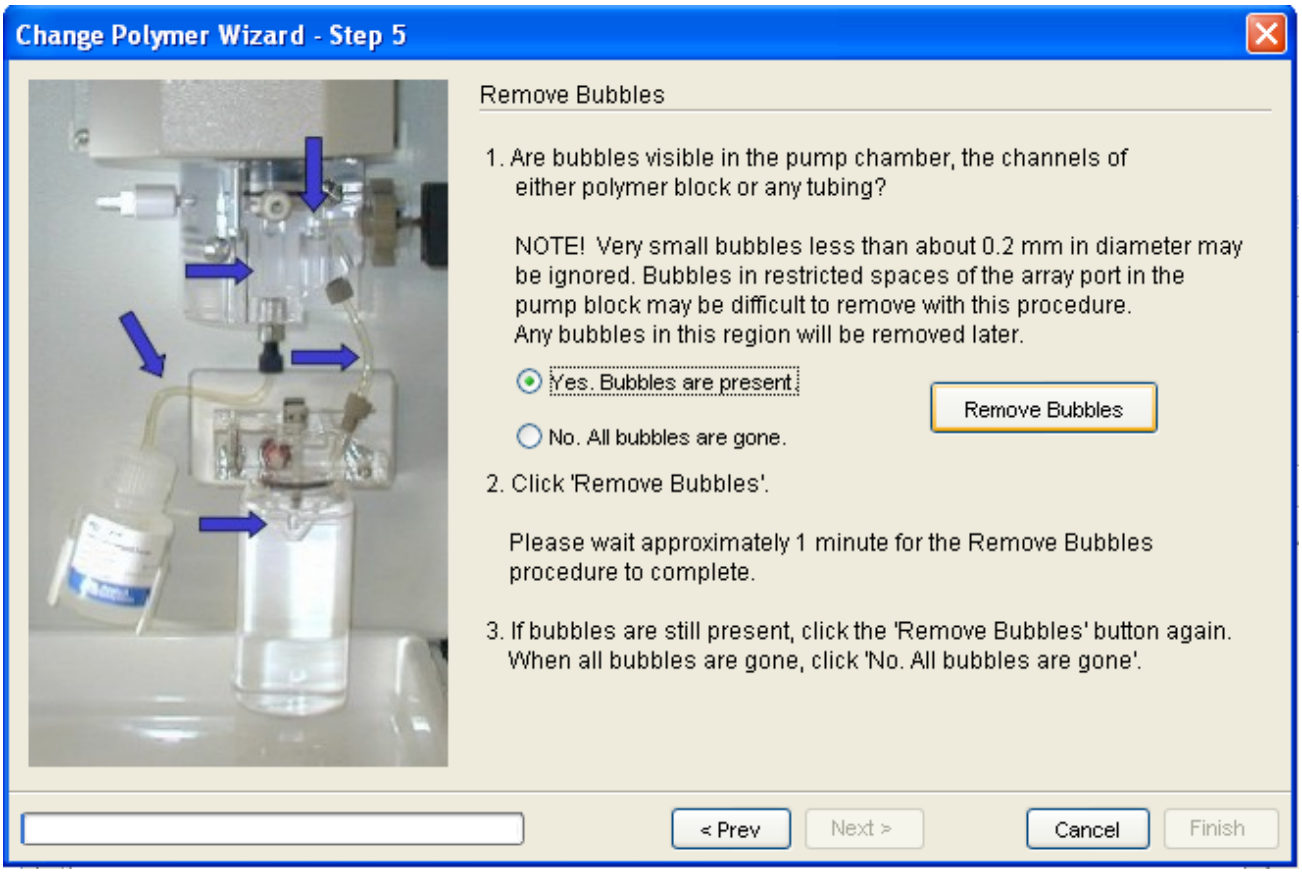
(d) Step 3, physically remove the polymer bottle and replace with the care solution bottle. Then click "Next."

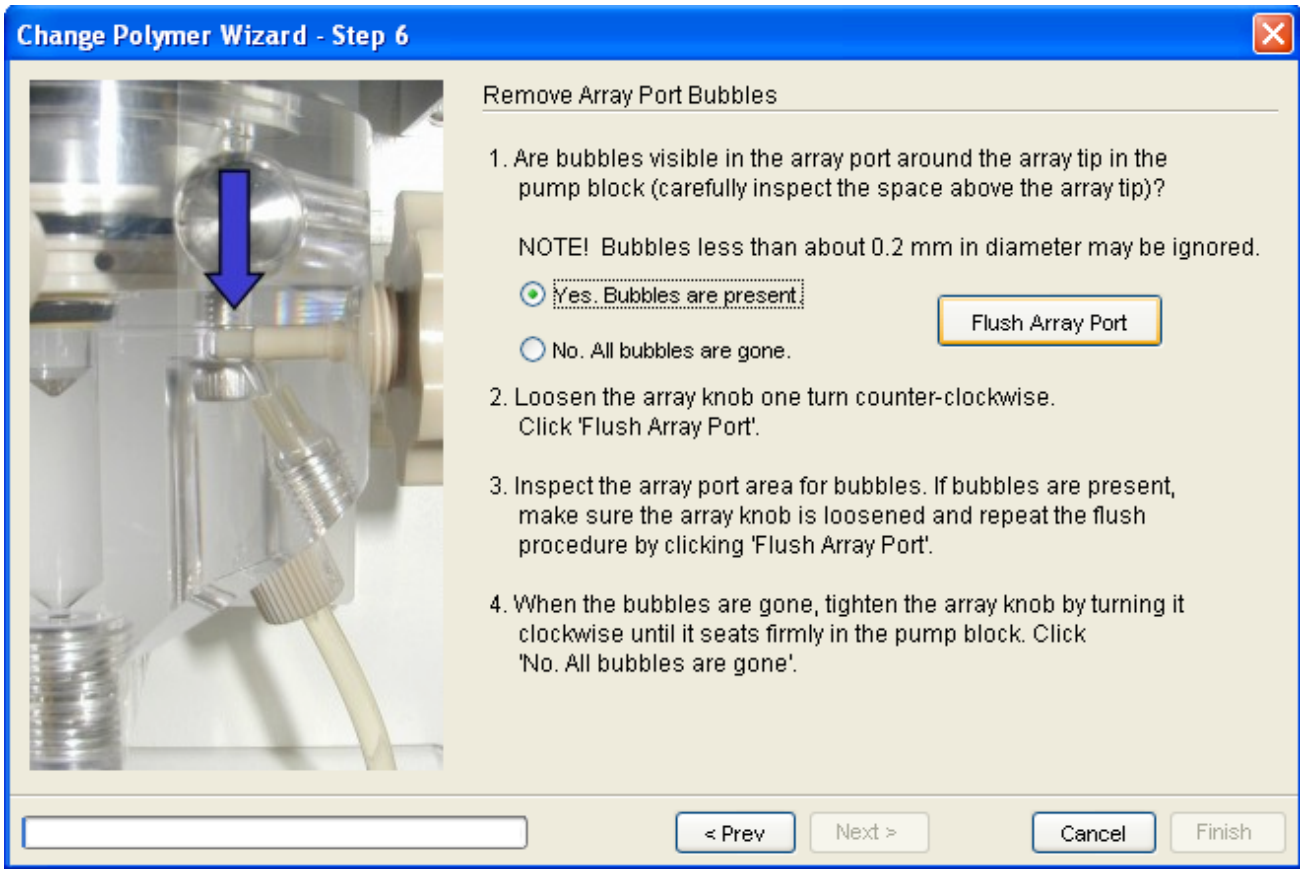

Change Polymer Wizard - Step 3
Replace Polymer
Note! Always wear appropriate protection when handling fluids used on this instrument.
1. Open the main door and remove the polymer bottle and supply tube cap from the instrument.
2. With a damp, lint-free lab wipe, clean any liquid and dried polymer from the polymer supply tube and cap. Dry these parts with another lab wipe.
3. Install a bottle of fresh polymer on the instrument. [Replace the shipping cap on the polymer bottle with the 1-hole supply tube cap. Slip the polymer supply tube through the hole in the cap and mount the bottle in the holder.]
4. Click Next.
< Prev
Next >
Cancel
Finish

(e) Step 4, Click "Prime" to fill the fluid system with fresh care solution. Then click "Next."

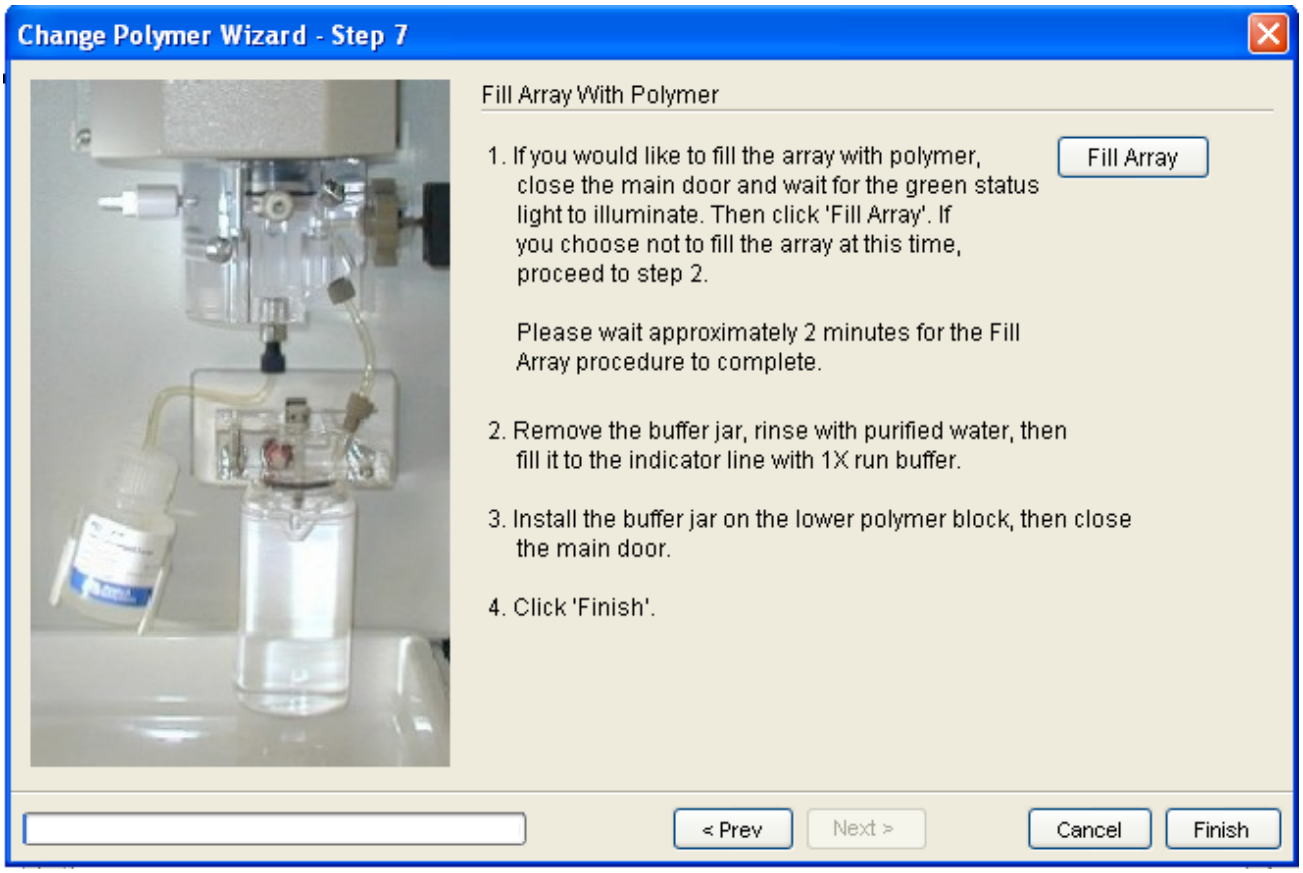

Change Polymer Wizard - Step 4
Prime the Pump with Fresh Polymer
1. Click 'Prime' to fill the fluid system with fresh polymer.
Prime
Please wait approximately 1 minute for the Prime procedure to complete.
2. Inspect the pump chamber, the channels of both polymer blocks and all tubing for bubbles.
NOTE! Removal of bubbles from all areas of the fluid system is important for problem-free electrophoresis.
3. Click 'Next'.
< Prev
Next >
Cancel
Finish

(f) Step 5 and Step 6, remove bubbles.

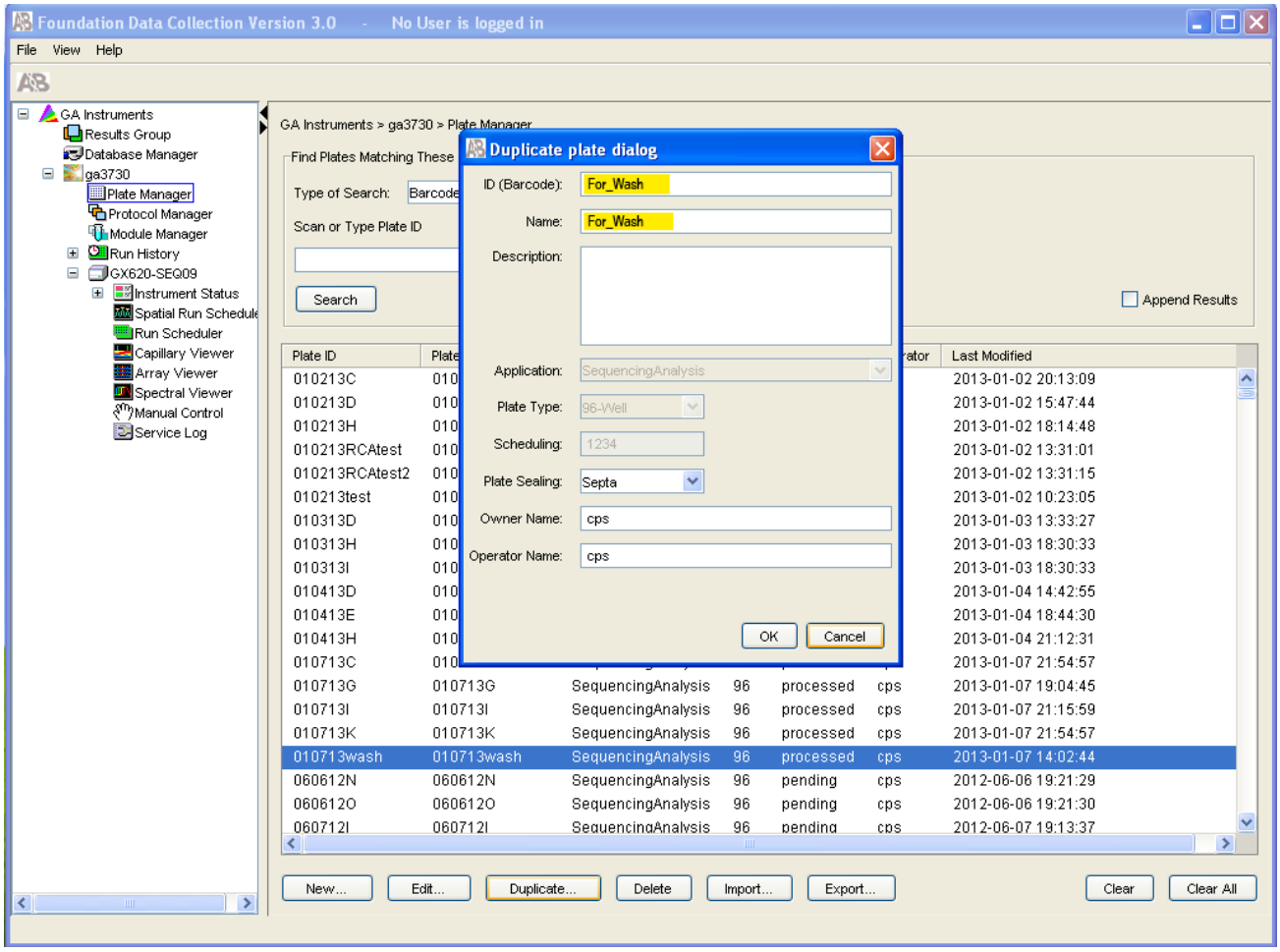

Change Polymer Wizard - Step 5
Remove Bubbles
1. Are bubbles visible in the pump chamber, the channels of either polymer block or any tubing?
NOTE! Very small bubbles less than about 0.2 mm in diameter may be ignored. Bubbles in restricted spaces of the array port in the pump block may be difficult to remove with this procedure. Any bubbles in this region will be removed later.
Yes. Bubbles are present
No. All bubbles are gone.
Remove Bubbles
2. Click 'Remove Bubbles'.
Please wait approximately 1 minute for the Remove Bubbles procedure to complete.
3. If bubbles are still present, click the 'Remove Bubbles' button again. When all bubbles are gone, click 'No. All bubbles are gone'.
< Prev
Next >
Cancel
Finish


Change Polymer Wizard - Step 6
Remove Array Port Bubbles
1. Are bubbles visible in the array port around the array tip in the pump block (carefully inspect the space above the array tip)?
NOTE! Bubbles less than about 0.2 mm in diameter may be ignored.
Yes. Bubbles are present.
No. All bubbles are gone.
Flush Array Port
2. Loosen the array knob one turn counter-clockwise. Click 'Flush Array Port'.
3. Inspect the array port area for bubbles. If bubbles are present, make sure the array knob is loosened and repeat the flush procedure by clicking 'Flush Array Port'.
4. When the bubbles are gone, tighten the array knob by turning it clockwise until it seats firmly in the pump block. Click 'No. All bubbles are gone'.
< Prev
Next >
Cancel
Finish

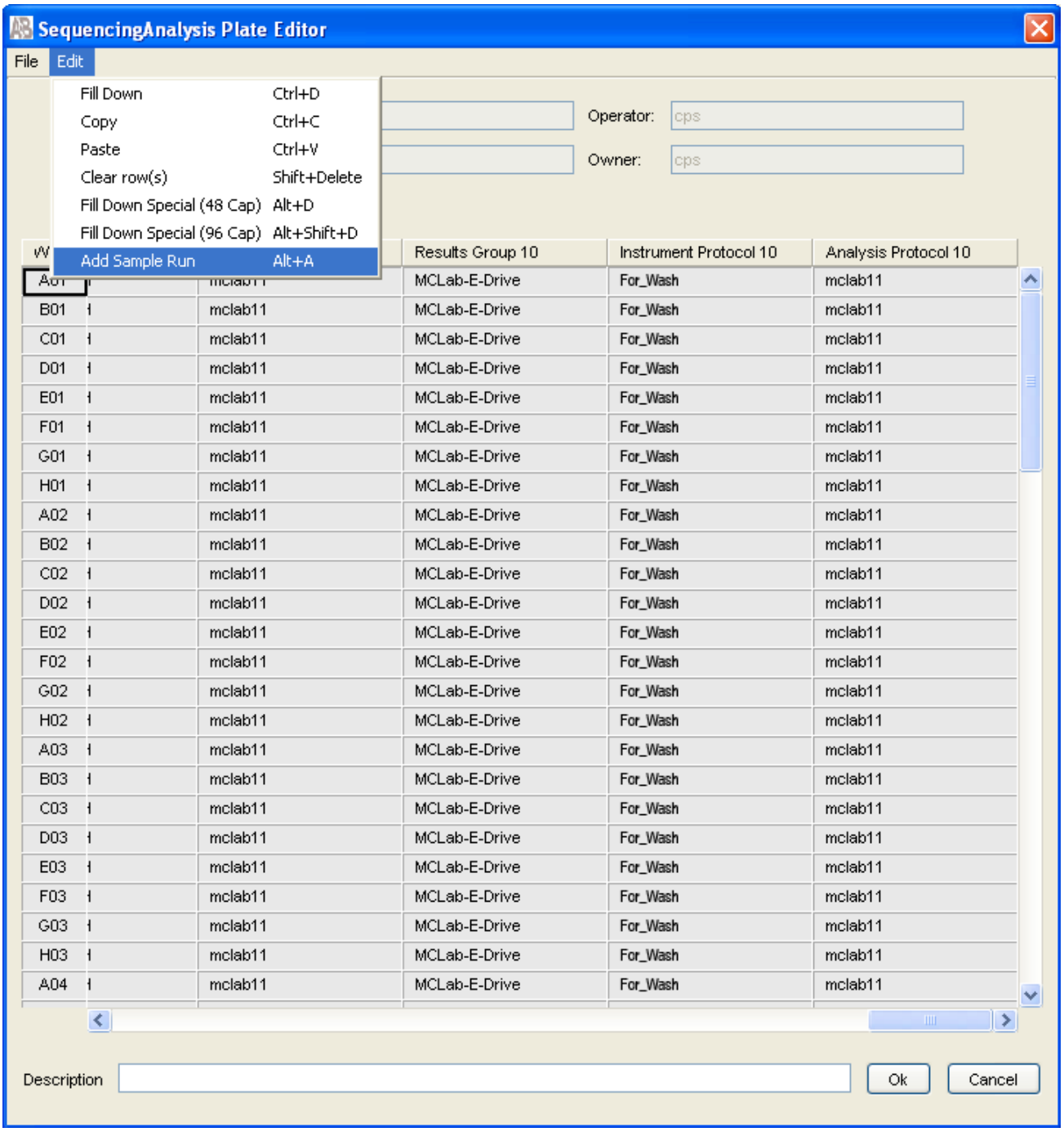
(g) Step 7, Fill array with care solution, Then click "Finish."


Change Polymer Wizard - Step 7
Fill Array With Polymer
1. If you would like to fill the array with polymer, close the main door and wait for the green status light to illuminate. Then click 'Fill Array'. If you choose not to fill the array at this time, proceed to step 2.
Fill Array
Please wait approximately 2 minutes for the Fill Array procedure to complete.
2. Remove the buffer jar, rinse with purified water, then fill it to the indicator line with 1X run buffer.
3. Install the buffer jar on the lower polymer block, then close the main door.
4. Click 'Finish'.
< Prev
Next >
Cancel
Finish

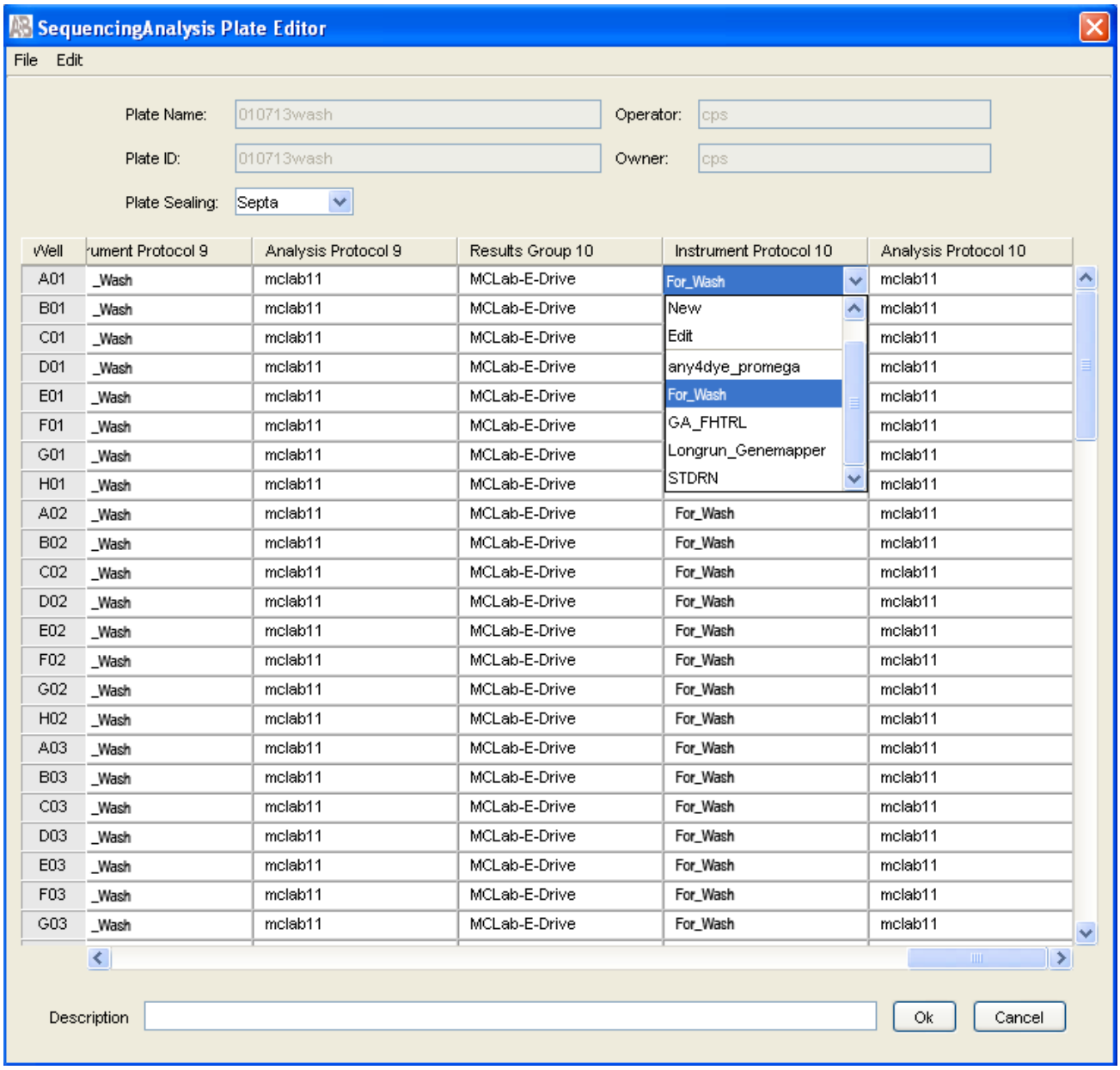
6. Create a new sample sheet just for the wash.
(a) In the left hand column, click on "plate manager."
(b) Choose any template, and click on "Duplicate." Change the name to "For_Wash," then click on "OK."



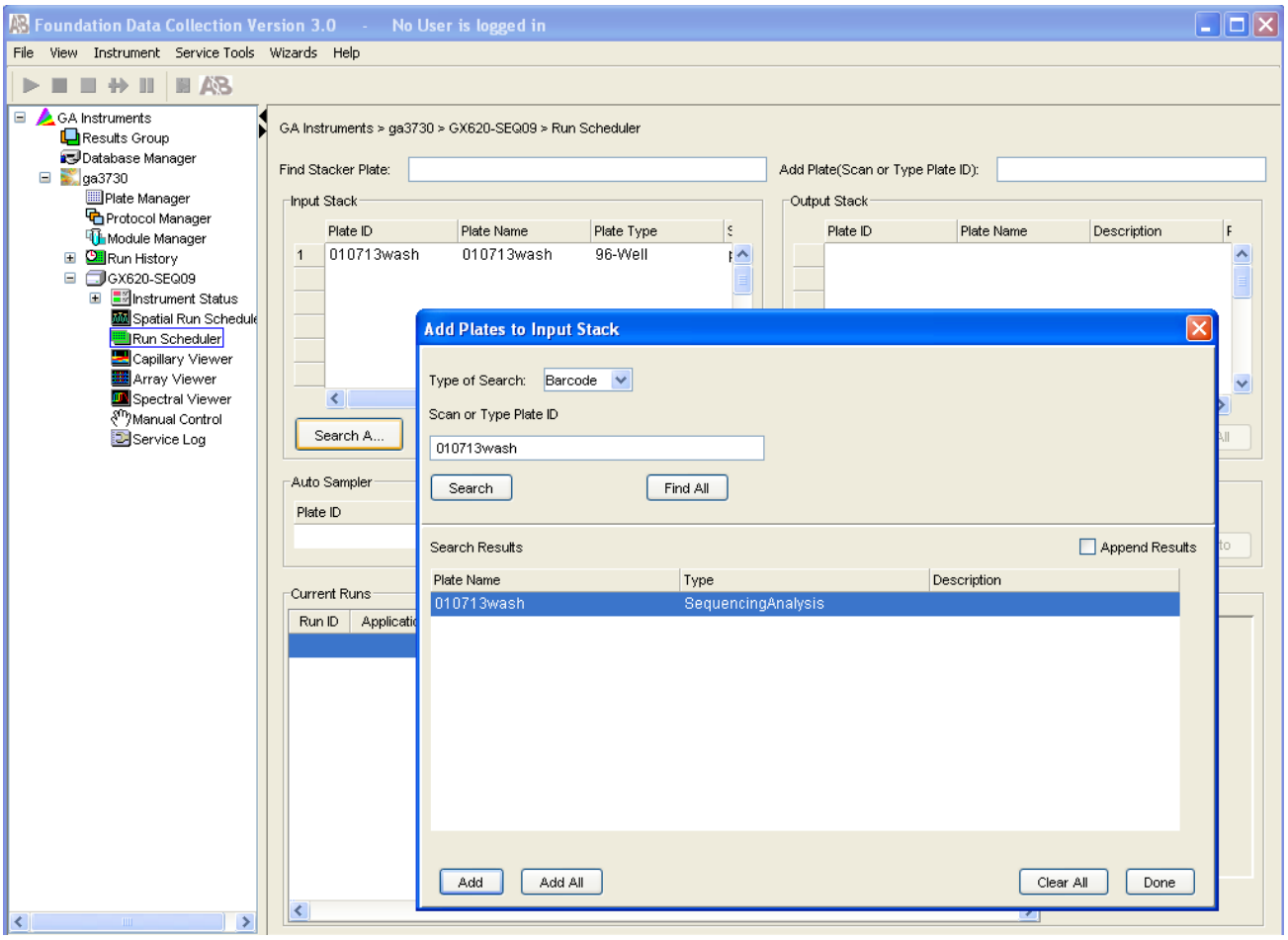
(c) The "SequencingAnalysis Plate Editor" will appear as the following screenshot.



(d) Click "Edit" then "Add Sample Run," and set up a total of 10 cleaning runs. Choose "For_Wash" as the run protocol in the "instrument
protocol" column. Then click "OK."


SequencingAnalysis Plate Editor
File Edit
Plate Name: 010713wash
Operator: cps
Plate ID: 010713wash
Owner: cps
Plate Sealing: Septa
Well
rument Protocol 9
Analysis Protocol 9
Results Group 10
Instrument Protocol 10
Analysis Protocol 10
A01 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
B01 _Wash mclab11 MCLab-E-Drive New mclab11
C01 _Wash mclab11 MCLab-E-Drive Edit mclab11
D01 _Wash mclab11 MCLab-E-Drive any4dye_promega mclab11
E01 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
F01 _Wash mclab11 MCLab-E-Drive GA_FHTRL mclab11
G01 _Wash mclab11 MCLab-E-Drive Longrun_Genemapper mclab11
H01 _Wash mclab11 MCLab-E-Drive STDRN mclab11
A02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
B02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
C02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
D02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
E02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
F02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
G02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
H02 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
A03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
B03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
C03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
D03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
E03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
F03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
G03 _Wash mclab11 MCLab-E-Drive For_Wash mclab11
Description
Ok
Cancel

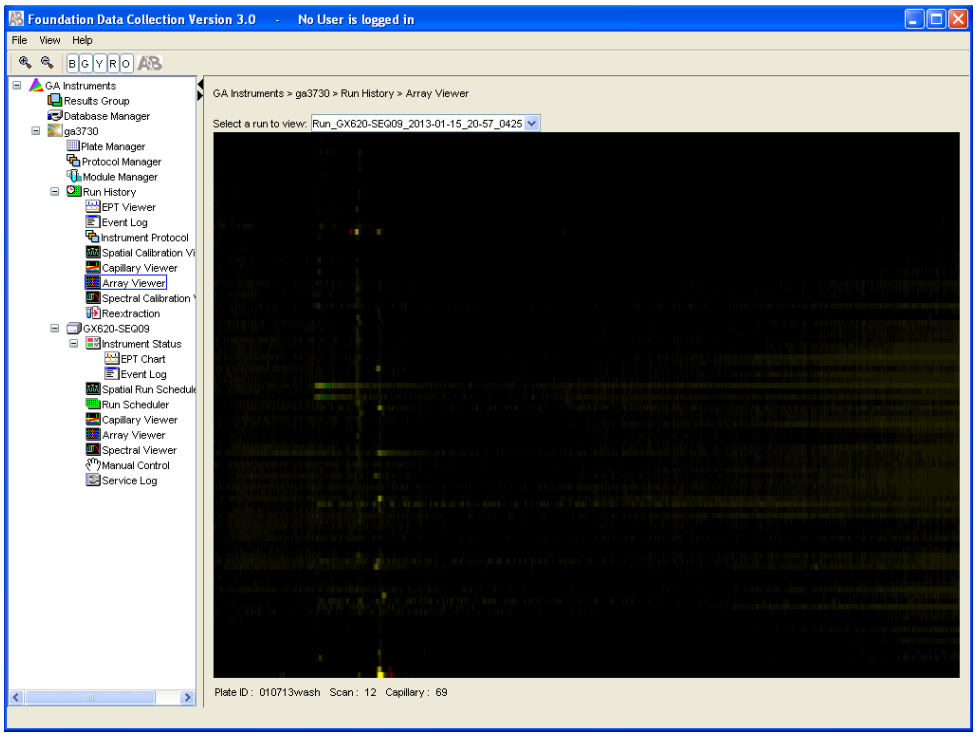
7. Schedule a run for the "Wash program."
(a) Click on "Run Scheduler" in the left-hand column and then click on "Search A…" button. "Add Plates to Input Stack" will appear.
(b) In the "Add Plates to Input Stack" window, enter your plate name in the search area, then click "Search." The plate name will appear on the bottom of this window. Click "Add" then "Done."



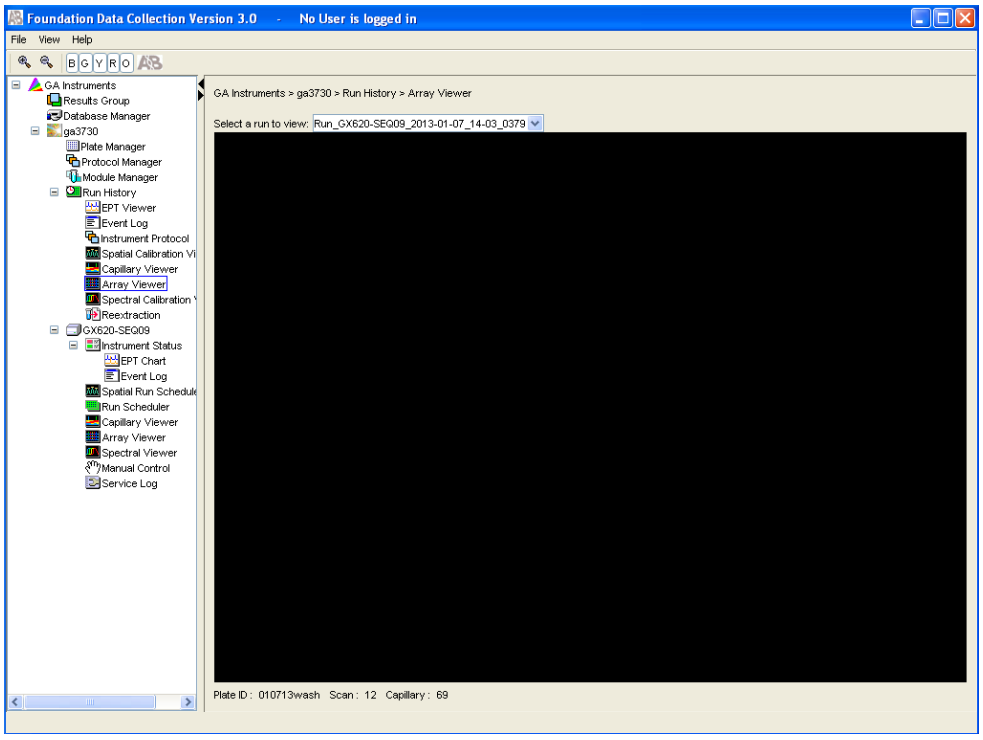
(c) The plate name will appear on the "Input Stack" list. The Care Solution Run can now start.

8. After the machine finish the operation, change the care solution bottle with polymer bottle according to the software protocol, and it's ready to run the sample.

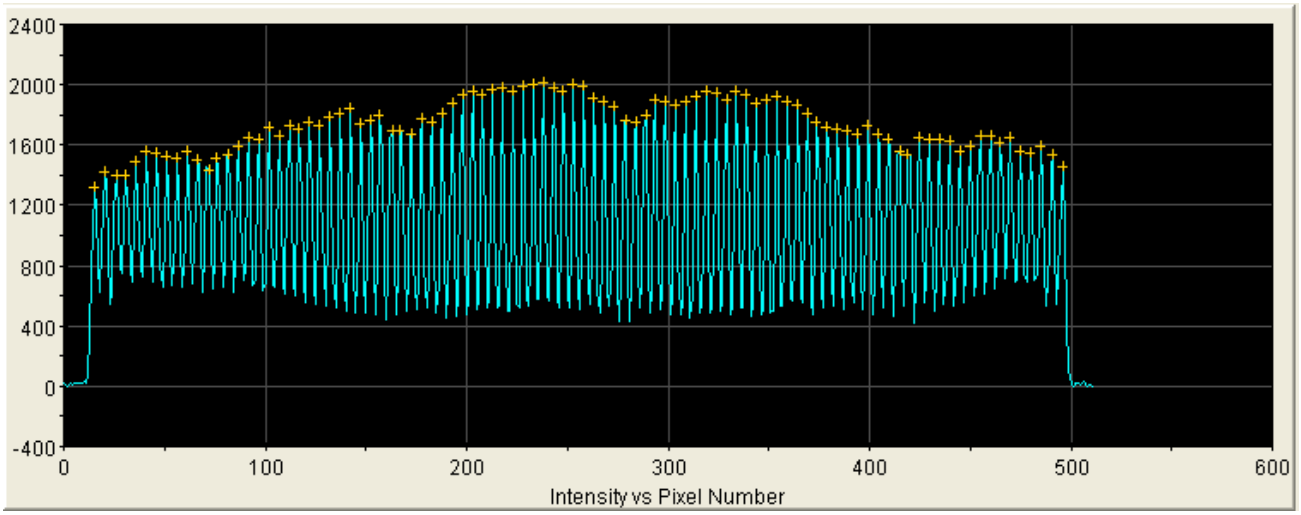
Results:



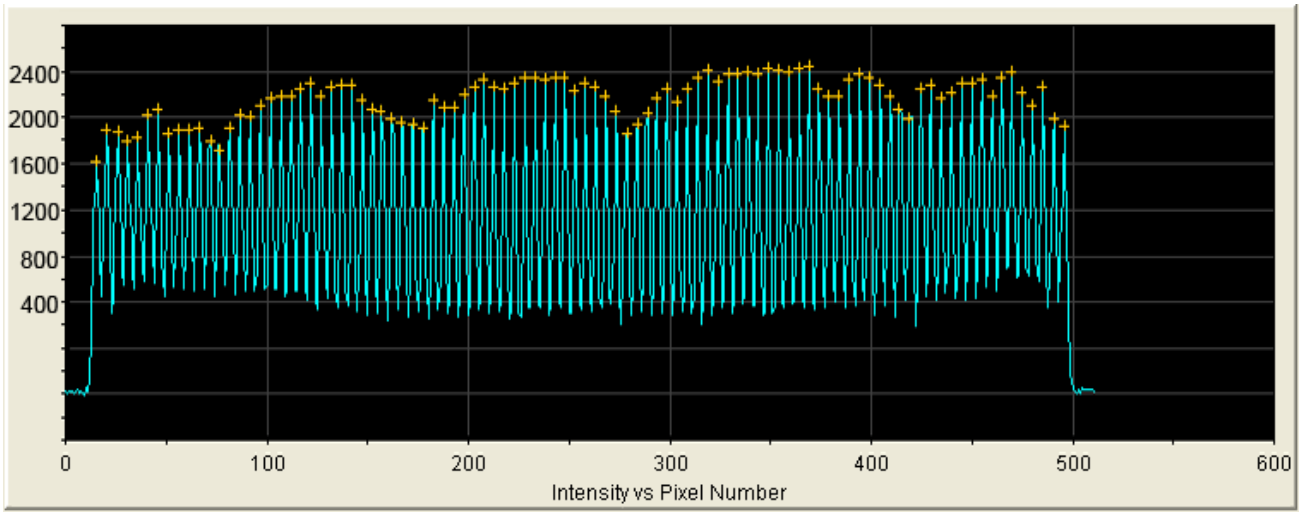
Before



After



Before



After